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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/087,263

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J. Zachary Gorman

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12/23/2004

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EXAMINER

TSAI, HENRY

ART UNIT

PAPER NUMBER

2183

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/087,263	Applicant(s) GORMAN ET AL.	
	Examiner Henry W.H. Tsai	Art Unit 2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34,37 and 38 is/are allowed.
- 6) ☒ Claim(s) 1-33, and 35, 36 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u> </u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/02</u> . | 6) <input type="checkbox"/> Other: <u> </u> |

Art Unit: 2183

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In Fig. 1, inside element 102-102b, "Alignment Unit" should read - Re-Alignment Unit -;

in Fig. 2a, "Post INS Pos CC" should be the output of operator 202c;

in Fig. 2b, "Pre INS Shift Amt CC", one input of the operator 206b, should read - Post INS Shift Amt CC -;

in Fig. 3b, at the end of the signal line 316, "Saved Post INS Shift Amt" should read - , "Saved Pre INS Shift Amt Pc-;

in Fig. 3c, "Pre INS Shift Amt CC", one input of the operator 324b, should read - Post INS Shift Amt CC -; and

in Fig. 6, "Re-aligned Instruction Value CC", one of right input group of the "Merg Data Calc" 602, should read - Re-aligned Instruction Value PC -.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

Art Unit: 2183

The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 2183

Specification

2. The disclosure is objected to because of the following informalities:

At page 8, line 2, "alignment unit 102a" should read - re-alignment unit 102a -. Similar problems exist in the other places such as page 8, line 14;

at page 8, line 17, "post" (first occurrence) should read - pos-;

at page 10, line 24, "post" (first occurrence) should read -pos-;

at page 11, line 6, "post" should read -pos-; and

at page 12, line 10, "pos" should read -post-.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-33, 35, and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written

Art Unit: 2183

description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, line 10, it is not clear what is meant by "cascaded alignment impact of cycles" since it was not described in the specification. Similar problems exist in claim 23.

In claims 8, 19, 30, 35 and 36, the limitations regarding data bit selection masks forming different data bit patterns, such as "110", "101", and "100" in claims 8 and 36; "010", "001", and "000" in claims 19, 30, and 35, are not clearly described in the specification. More descriptions for the different situations are required. Note the program shown at page 17 needs more documentations to explain how it works.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

Art Unit: 2183

out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 1-5, it is not clear how to have "one or more data bytes into a stream of data words" if "a first and a second intermediate data word correspondingly containing first and second zero or more data bytes of a first data word of a preceding cycle" since if both the first and the second intermediate data word correspondingly containing first and second zero data bytes of a first data word of a preceding cycle. The language is not logic. Similar problems exist in claim 23.

In claim 1, lines 11-15, it is not clear what is meant by "said second zero or more data bytes being repositioned within said second intermediate data word relative to said cascaded alignment impact of cycles prior to said preceding cycle, said first data byte insertion point of the preceding cycle, and a first number of data bytes inserted after said first data byte insertion point of the preceding cycle" since a zero or more data bytes can not be repositioned within three said elements. Similar problems exist in claim 23.

In claim 1, line 13-14, it is not clear what is meant by "a first number of data bytes" since data bytes can form many

Art Unit: 2183

numbers and how many numbers can be in the data bytes was not defined.

Appropriate correction is required.

Allowable Subject Matter

7. Claims 34, 37, and 38 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: Thompson et al. (U.S. Patent No. 5,491,802), the closest reference, and the other prior art do not teach or fairly suggest: a circuit to generate an output data word conditionally using four kinds of input specifically described as: (1) selected parts of a first and a second intermediate data word generated from a first input data word of a current cycle, (2) a third and a fourth intermediate data word generated from a second input data word of a preceding cycle, (3) a first re-aligned variant of a first insertion data word of the current cycle, and (4) a second re-aligned variant of a second insertion data word of the preceding cycle, in accordance with said data bit selection masks as described in claim 34.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patel'891 discloses: alignment of sign, data, edit byte operand results for storage in memory. Two registers are provided, each having a capacity equal to that of a memory word. Each register is provided with segmented input selection means for selecting from among calculation results, residual data retained from operand fetching, signs, and constants. The two registers are OR'd together to produce desired words for storage in the system's memory. Kindell et al.'035 discloses: Apparatus and method for rewrite data insertion in a three descriptor instruction. The data of the boundary words which are not part of the resulting operand, and should therefore be retained and inserted in appropriate positions of the appropriate boundary word by a retrieval of the boundary words which do not interrupt the normal data processing sequence. Sites et al.'682 discloses: in-register data manipulation for unaligned byte write using data shift in reduced instruction set processor. Byte manipulation instructions, included to permit use of previously-established data structures, include the facility for doing in-

Art Unit: 2183

register byte extract, insert and masking, along with non-aligned load and store instructions. The provision of load/locked and store/conditional instructions permits the implementation of atomic byte writes.

Contact Information

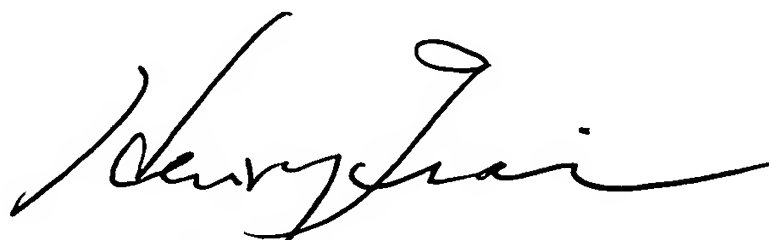
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (571) 272-4176. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Eddie Chan, can be reached on (571) 272-4162. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC central telephone number, 571-272-2100.

11. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into the Group at fax number: 703-872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by

Art Unit: 2183

applicants who authorize charges to a PTO deposit account.

Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.

A handwritten signature in black ink, appearing to read 'Henry Tsai', written in a cursive style.

HENRY W. H. TSAI
PRIMARY EXAMINER

December 11, 2004